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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/872,906	06/01/2001	Fergus Rupert Fitzgerald	P66736US0	5114

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EXAMINER

GOFF II, JOHN L

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 01/02/2003

11

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/872,906

Applicant(s)

FITZGERALD, FERGUS RUPERT

Examiner

John L. Goff

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/10/02 (Election).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 27-33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I, claims 1-26, in Paper No. 10 is acknowledged. The traversal is on the ground(s) that the tank cannot be made by another method other than that taught by claim 1 because the product claimed in claim 27 is "A tank whenever lined by the method as claimed in claim 1." This is not found persuasive because a product defined by the process by which it can be made is still a product claim (In re Bridgeford, 357 F.2d 679, 149 USPQ 55 (CCPA 1966)) and can be restricted from the process if the examiner can demonstrate that the product as claimed can be made by another materially different process; defining the product in terms of a process by which it is made is nothing more than a permissible technique that applicant may use to define the invention (See MPEP 806.05(f)). The examiner demonstrated in paper no. 8 that the product as claimed can be made by another materially different process.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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4. Claim 1 recites the limitation "the material" in line 8. There is insufficient antecedent basis for this limitation in the claim.
5. In claim 1, the phrase "applying an interstitial grid to the tank" is unclear and confusing. Does it mean the interstitial grid is applied to the corrosion barrier coating? It is suggested to change "applying an interstitial grid to the tank" to - - applying an interstitial grid to the corrosion barrier coating - -. This issue should be clarified and reworded as appropriate.

Claim Rejections - 35 USC § 102/103

6. Claims 1-4, 6, 7, 16, 17, and 23 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Zandbergen et al. (U.S. Patent 5,904,265).
7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Zandbergen et al. are directed to a tank lining. Zandbergen et al. teach a method for lining the tank comprising sand-blasting (keying) the inner surface of the tank and applying a double-walled lining (interstitial grid) to the inner surface (Figure 1 and Column 2, lines 36-37 and 40-43). Zandbergen et al. teach the lining may be reinforced on one or both sides with a glass-fiber-reinforced laminate ply (a corrosion barrier on one side and a glass reinforced plastics material on the other side) (Figure 1 and Column 3, lines 35-37). Zandbergen et al. teach the upper laminate ply may have an outer sealing layer applied to it (Column 3, lines 38-41). Zandbergen et al. teach the lining comprises upper and lower fabrics (facings) (Column 2, lines 48-53). Zandbergen et al. teach the lining may be formed of a plastic (carbon fiber and aramid fiber) material (Column 3, lines 28-31). Zandbergen et al. teach bonding the laminate plys and double-walled lining to each other and the inner surface of the tank using a number of adhesives including ultraviolet-curing resins (Column 3, lines 60-64). The use of ultraviolet rays to cure the uv-curing resin is inherent in the process taught by Zandbergen et al. as Zandbergen et al. teach using a uv-curing resin to attach the glass-fiber reinforced laminate plys to the lining and to the inner surface of the tank. In any event, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply ultraviolet rays to cure the resin in the process of Zandbergen et al. since Zandbergen et al. teach that the resin is uv-curable.

9. Claims 5, 11-15, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zandbergen et al. (U.S. Patent 5,904,265 used as a translation).

Regarding claims 5 and 11, as noted above Zandbergen et al. teach the lining comprises upper and lower fabrics (facings) (Column 2, lines 48-53). Zandbergen et al. further teach the lining may be formed of a plastic (carbon fiber and aramid fiber) material (Column 3, lines 28-

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31). Absent any unexpected results, one of ordinary skill in the art at the time the invention was made would have readily appreciated that the plastic material taught by Zandbergen et al. would have also included polyester and polyethylene fibers as these were well known tank lining materials.

Regarding claims 12 and 13, while Zandbergen et al. do not specifically recite lining the tank surrounding the manway last, one of ordinary skill in the art at the time the invention was made would have readily appreciated lining this section of the tank last so as to avoid damaging the parts of the tank previously lined.

Regarding claims 14 and 15, it is noted Zandbergen et al. teach joining sections of the lining along a seam wherein the ducts of the lining can communicate with each other, i.e. the sections would be butt joined to one another along the seam not overlapping one another (Column 3, lines 45-55). Zandbergen et al. do not specifically teach joining the sheets at the seam using tape. However, it is well known in the art to join two materials along a seam using tape, and one of ordinary skill in the art at the time the invention was made would have readily appreciated joining the laminate plys at a seam using tape, as only the expected results would be achieved.

Regarding claim 26, it is noted Zandbergen et al. are silent as to using uv lamps to cure the uv-curing resin. However, one of ordinary skill in the art at the time the invention was made would have readily appreciated using uv lamps to cure the uv resin as uv lamps were well known and conventional in the art and only the expected results would be achieved.

10. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zandbergen et al. as applied in paragraph 6 above, and further in view of Bachmann (U.S. Patent 5,269,436).

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Zandbergen et al. as applied above teach all of the limitations in claims 8-10 except for a teaching on using as the lining (interstitial grid) a metal mesh. However, it is well known in the art to use a metal mesh as lining material as shown for example by Bachmann. One of ordinary skill in the art at the time the invention was made would have readily appreciated using as the lining material taught by Zandbergen et al. a metal mesh as was well known in the art as shown for example by Bachmann to increase the strength of the tank wall.

Bachmann is directed to a double-walled tank. Bachmann teach forming the lining (spacer) from a metal (such as aluminum) or plastic mesh material (Column 1, lines 36-40 and Column 2, lines 7-9 and 22-24). Bachmann teaches the metal mesh adds strength while the plastic mesh adds flexibility to the wall (Column 1, lines 51-53 and Column 2, lines 9-12).

11. Claims 18, 19, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zandbergen et al. as applied in paragraph 6 above, and further in view of Chadbourne et al. (U.S. Patent 4,552,166).

Zandbergen et al. as applied above teach all of the limitations in claims 18, 19, and 22 except for a teaching on cleaning, inspecting, and repairing the tank prior to applying the lining. It is well known in the art to clean, inspect, and repair the tank prior to retrofitting as shown for example by Chadbourne et al. One of ordinary skill in the art at the time the invention was made would have readily appreciated cleaning, inspecting, and repairing the tank taught by Zandbergen et al. prior to retrofitting the tank as suggested by Chadbourne et al. as only the expected results would be achieved.

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Chadbourn et al. are directed to retrofitting a vessel with a secondary containment (lining). Chadbourn et al. teach cleaning, inspecting, and repairing the tank prior to retrofitting (Column 1, lines 57-61).

12. Claims 20, 21, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zandbergen et al. as applied in paragraph 6 above, and further in view of Watkinson (U.S. Patent 5,752,616) and Yamabe et al. (U.S. Patent 4,436,772).

Zandbergen et al. as applied above teach all of the limitations in claims 20, 21, and 25 except for a teaching on the glass-fiber-reinforced laminate plys comprising a glassflake epoxy resin. It is well known in the art to use as the glass-fiber-reinforcement layer a layer comprising a glassflake epoxy resin as shown for example by Watkinson and Yamabe et al. Absent any unexpected results one of ordinary skill in the art at the time the invention was made would have readily appreciated using as the glass-fiber-reinforced laminate plys taught by Zandbergen et al. a glassflake epoxy as was well known in the art as shown for example by Watkinson and Yamabe et al.

Watkinson is directed to a method of applying a laminate to a storage vessel. Watkinson teaches providing the inside of the vessel wall with a glass-fiber-reinforcement layer (corrosion barrier layer) wherein the layer comprises a glassflake epoxy resin and the layer has a thickness greater than 1000 microns (Column 5, lines 66-67 and Column 6, lines 1-8). Yamabe et al. are directed to an anticorrosive coating for bridges or tanks wherein the coating comprises a glass-fiber-reinforcement made of glass flakes in epoxy resin (Column 8, lines 22-27).

13. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zandbergen et al. as applied in paragraph 6 above, and further in view of Hutchison (U.S. Patent 5,118,540).

Zandbergen et al. as applied above teach all of the limitations in claim 24 except for a teaching on providing the glass-fiber-reinforced laminate plys with protective, release films. It is conventional in the art to provide a laminate with a release film in order to protect the laminate prior to its application as shown for example by Hutchison. One of ordinary skill in the art at the time the invention was made would have readily appreciated providing the glass-fiber-reinforced laminate plys taught by Zandbergen et al. with protective, release films as suggested by Hutchison to protect the plys prior to their application.

Hutchison is directed to applying a corrosion resistant film. Hutchison teaches a corrosive film including an adhesive layer temporarily attached to a removable film. Hutchison teaches the removable film protects the adhesive prior to applying corrosion resistant film (Column 4, lines 44-46).

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Conclusion


14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John L. Goff** whose telephone number is **703-305-7481**. The examiner can normally be reached on M-Th (8 - 5) and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on 703-308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



John L. Goff
December 30, 2002



STEVEN D. MAKI 12-30-02
PRIMARY EXAMINER
~~GROUP 1300~~
AU 1733